



THE ROLES OF VGIS PARTNERS: REGIONAL PLANNING COMMISSIONS, STATE & LOCAL GOVERNMENT, AND OTHERS

- I. SCOPE** This policy describes the roles of the Vermont Center for Geographic Information, Inc. (VCGI), local and state government, regional planning commissions, and other organizations, as partners in the Vermont Geographical Information System (VGIS).
- II. BACKGROUND** The Vermont Municipal and Regional Planning and Development Act - as amended (24 VSA, Chapter 117 et seq.) requires the analysis and mapping of land uses, transportation, utilities, solid waste facilities, schools, and hospitals. The act also provides funds for the creation of a Vermont Geographic Information System (VGIS). 10 VSA, Chapter 8 establishes a VGIS strategy and creates the Vermont Center for Geographic Information, Inc. (VCGI). Use of geographic information systems technology in municipal government in Vermont started in the mid-1980s, when the University of Vermont (School of Natural Resources) began to work in applying some of the basic information about our environment (soils, surface waters, etc.) for local government use in Chittenden County. The Vermont General Assembly created the Vermont Geographic Information System by statute in 1988, and Governor Madeleine Kunin's 1989 Executive Order #75 established an executive office, an advisory board, and a plan to implement GIS Statewide. The policy adopted in 1989 called for the establishment of regional service centers to assist municipalities in using geographic information technology. Vermont's twelve regional planning commissions (RPCs) established such centers and have been using GIS to address local and regional planning needs since then.

A cornerstone of Vermont's GIS program is the development of standards, which allow data to be shared by other users. VGIS standards cover areas including accuracy, documentation, geographic area coding, land use coding, etc. The Vermont GIS program recognizes different needs for scale and accuracy at the local, regional and state level. At the local level, the Vermont orthophoto base maps serve as the base maps for GIS products. These maps are at a scale of 1:5000, with some parts of the state at 1:1250 scale. Many communities have tax or parcel maps which are based upon orthophotos.

The U.S. Geological Survey (U.S.G.S.) also has a map series of Vermont at the 1:24,000 and 1:100,000 scales. Because this base map is used by the U.S. Bureau of the Census and by many state agencies, it

serves as the basis for many data bases intended for use at regional and state scales.

VCGI cooperates with state agencies, regional planning commissions, municipal government, and commercial GIS service providers to routinely share public GIS databases and work together on a variety of projects.

III. THE MULTI-LEVEL VERMONT GEOGRAPHIC INFORMATION SYSTEM

The Vermont GIS cannot operate without the participation of local, regional and state agencies, the private sector, and others. Each is an indispensable source of data for the others, and each gains from the cooperation of the others.

No single model works for the collection of all GIS data and the delivery of all GIS services. However, some principles can be expressed to help allocate responsibilities. In the VGIS, each level of government should:

- ▶ provide that data to the VGIS system which it can most effectively and accurately collect and update.
- ▶ have GIS services available nearby, in a useful form, and at a reasonable cost.
- ▶ become a direct supplier of GIS services to the extent that it has significant spatial analysis needs and to the extent its resources permit support for the appropriate personnel and equipment.

IV. LOCAL GOVERNMENT ROLES

Each municipality with land use powers should consider how it wants to obtain GIS services. All municipalities should consider applications other than those related to land use (e.g. E-911, transportation planning, infrastructure maintenance, etc.) for which GIS can be useful. Before investing in GIS equipment, towns should evaluate carefully — with the help of RPCs, other towns, or consultants — the costs and benefits of bringing GIS technology “in-house.”

Obtaining GIS Services

Many municipalities may not have the financial resources or the need to set up a GIS installation solely for their own use. These municipalities should contact their regional planning commissions to determine whether the RPCs are willing to act as GIS service centers. However, decreasing costs and increasing ease-of-use make “desktop” GIS computers and software a productive investment for more and more towns.

The RPC within the region, or a commercial GIS service provider will assist those towns and cities which wish to set up a GIS installation. In addition to providing all the usual forms of data collection and

checking, such municipalities should plan to develop procedures, by which municipal data can be made available to regional planning commissions.

GIS Data Acquisition

The Vermont GIS depends heavily on cooperation by local governments. State and regional resources can compile data layers and a base map as a starting point. State and regional data bases should be created, whenever possible, with sensitivity to local needs and with the intent of contributing to local data base creation.

Local governments have most interest in the development and maintenance of several key data layers, including:

- ▶ digital orthophotographs, which serve as the high-accuracy base map for the development of many other municipal-scale data layers,
- ▶ parcel boundaries,
- ▶ zoning,
- ▶ land use,
- ▶ water, sanitary sewer, storm water, and other infrastructure facilities, and
- ▶ septic systems.

In some cases local governments obtain GIS data needed only for their own purposes. This information need not be transferred to VCGI data archives, but may stay in local or regional data files. The VCGI database clearinghouse receives listings of such local data layers, but may not store the data itself.

V. REGIONAL ROLES

Vermont's regional planning commissions act as GIS service centers for local and regional planning within their respective regions. Regional planning commission duties include provision of technical assistance to municipalities and state agencies on public financing, economic development, land use and conservation, promotion of mutual cooperation between communities, and regional planning to ensure orderly development within a region. Regional GIS service centers provide GIS services to support regional planning efforts, and also support local planners and officials when requested.

RPCs often act as the conduit for getting local and regional data into the VGIS and as regional data maintenance coordinators. They collect data compiled and updated within the region, check it against published minimum standards, and convey it in suitable format to VCGI. The service centers also distribute GIS data prepared by the state and themselves to any local governments which desire the data directly for their own GIS operations. RPC roles include:

1. Providing GIS data, maps and analyses for cities, towns, and villages which do not have in-house GIS capability.
2. Assisting local government units to obtain in-house GIS capabilities, and providing supplemental data and assistance to them.
3. Serving as the coordinator and repository of digital data for the region's cities and towns.
4. Advising local governments on how to meet VGIS data standards and, where feasible, convert local government data to digital form.

VI. STATE ROLES

The legislative intent and findings of the Vermont General Assembly, as expressed in Act 204 of 1994, are as follows:

- (1) Since 1988 Vermont has been implementing a comprehensive strategy for the development and use of a geographic information system (GIS).
- (2) Data that has been collected by any part of state government or generated with state support should be compatible with, useful to, and shared within the geographic information system.
- (3) To protect the individual's right to know, public records must be available at nominal cost.
- (4) Increased electronic access to the state's information systems will enhance the delivery of public services, production of new products and services based on Vermont's investment in spatial information, and the availability of that spatial information throughout the state.
- (5) The creation and distribution of electronic data which contains individual identifiers shall be limited in order to protect individual privacy.

Act 204 of 1994 also created VCGI, and stated that "the purposes of the center shall be to:

- (1) Assure that all VGIS data is of high quality and is compatible with, useful to, and shared with other public-sector and private-sector data users.
- (2) Encourage the same high standards of quality and compatibility in other Vermont GIS cooperators.
- (3) Promote the efficient development and use of geographic information by agencies of the state, its political subdivisions, Vermont businesses and citizens.
- (4) Facilitate the growth of commercial services within Vermont for the provision of spatial data, products, and services.

Within the limits of available resources, the center shall operate a program of standards development, data dissemination, and quality assurance. . .”

-- 10 VSA 123 (b) and (c)

VCGI works with federal, state, and municipal governmental units, regional planning commissions, not-for-profit agencies, and commercial GIS firms to achieve these purposes.

Important roles are performed by other state agencies charged with responsibilities directly related to regional planning and municipal government. These agencies include:

- ▶ the Vermont Enhanced 911 Board,
- ▶ the Agency of Transportation,
- ▶ the Department of Housing and Community Affairs, and
- ▶ the Department of Environmental Conservation.

VII. OTHER VGIS PARTNERS

Agencies of the United States federal government may use VGIS data, and may be in a position to contribute funding and other resources to its development and maintenance. Commercial interests also use VGIS data and perform a critical role in its development and maintenance, on behalf of their clients, or for internal purposes.

Federal Agencies

Most federal agencies which use or develop spatial data are member agencies of the **Federal Geographic Data Committee (FGDC)**, established in 1994 by Executive Order. Many such agencies have relationships with Vermont agencies of local or state government; they include:

- ▶ the Environmental Protection Agency,
- ▶ the US Geological Survey (Department of the Interior),
- ▶ the Natural Resources Conservation Service (Department of Agriculture), and
- ▶ the Federal Highway Administration (Department of Transportation).

Commercial Contractors For Mapping or Digitizing

Some municipalities, state agencies, or RPCs prefer to hire contractors to prepare GIS maps or to digitize data. Such contractors use a variety of software products and accuracy standards. All such contracts should include the following requirements:

- ▶ All map products and digital databases should meet national map accuracy standards at the 1:5000 or 1:1250 orthophoto scales, and should be registered to the Vermont Plane Coordinate system.

- ▶ Digitized geographic data should meet the relevant GIS standards for digitizing available from VCGI .

A list of available local GIS consultants capable of providing this service is available from VCGI.